

### **REMARKS**

Claims 3, 5-11, 14, 16-22, 25, and 27-33 are pending in the application. The Examiner's reconsideration of the rejections in view of the amendments and remarks is respectfully requested.

Applicants appreciate the Examiner's indication that Claims 3, 5-11, 14, 16-22 and 25, 27-33 are allowable over the art of record upon pending condition of the "101" rejection.

Claim 16 has been amended to be depend from Claim 14 in view of the Examiner's comment in paragraph 1 of the Office Action.

Claims 3, 5-11, 14, 16-22 and 25, 27-33 have been rejected under 35 USC 101, as being directed to non-statutory subject matter.

Referring to Claims 3, 7, 8, 14, 18, and 19; Claims 3 and 14 are the independent claims.

Referring to Claim 3; Claim 3 claims, *inter alia*, "a pointer array electrically coupled by a bus to the vector data file, the pointer array including a plurality of entries wherein each entry identifies at least one storage element in the vector data file." The "bus" as recited in Claim 3 grounds the claims in hardware, e.g., electrically coupling a pointer array and a vector data file. Such a bus is not implemented in software. Further, as shown in Figures 1 and 2 elements such as the vector register file are disclosed as hardware. Therefore, Claim 3 is believed to be directed towards tangible subject matter and is statutory.

Referring to Claim 14; Claim 14 recites, *inter alia*, a computer-implemented method “updating at least one of the entries of the pointer array based on one of data read out from at least one data element in the vector data file and data generated by performing an increment operation on data read from at least one entry of the pointer array, wherein at least two entries of the pointer array are updated as part of a same logical operation.” Such an updating, and the resulting pointer array, allow for “at least two entries of the pointer array are updated as part of a same logical operation” – a practical application of the method. Consider that in *Diamond v. Diehr*, 450 U.S. 175, 209 USPQ 1 (1981), the Court noted, “when [a claimed invention] is performing a function which the patent laws were designed to protect (e.g., transforming or reducing an article to a different state or thing), then the claim satisfies the requirements of Section 101.” *Diehr*, 450 U.S. at 192. In Claims 14, at least two entries of the pointer array are updated as part of a same logical operation. The updated entries of the pointer array are a reduction of one of data read out from at least one data element in the vector data file and data generated by performing an increment operation on data read from at least one entry of the pointer array; the updated entries of the pointer array are therefore believed to be a useful, tangible and concrete result of the application of the claimed limitations. For example, consider the following:

“[T]ransformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes a practical application of a mathematical algorithm, formula, or calculation, because it produces ‘a useful, concrete and tangible result’ -- a final share price momentarily fixed

for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades.” *State Street*, 149 F.3d at 1373, 47 USPQ2d at 1601.

It is important to note that a resulting use of the final share price for recording and reporting purposes, etc., is not recited in the claims of the patent at issue in *State Street*. It is enough for the result, e.g., a final share price or updated entries of the pointer array, to be useful. A limitation explicitly claiming a use of the result is not needed to satisfy the requirements of 35 USC 101. Therefore, Claim 14 is believed to be directed towards statutory subject matter.

Claims 7 and 8 depend from Claim 3. Claims 18 and 19 depend from Claim 14. The dependent claims are believed to be allowable for at least the reasons given for the respective independent claims. The Examiner’s reconsideration of the rejection is respectfully requested.

Referring to Claims 5, 6, 16, and 17, Claims 5 and 16 are the independent claims. Claims 5 and 16 are believed to be allowable for at least the reasons given for Claims 3 and 14, respectively. Reconsideration of the rejection is respectfully requested.

Claims 9 and 10 are believed to be allowable for at least the reasons given for Claim 3. Reconsideration of the rejection is respectfully requested.

As to Claims 11, 20-22, the Examiner stated essentially no substantial practical application can be found for the arbitrary starting address and suggested and further that the claims may be directed towards non-functional descriptive material.

Claim 11 is believed to be allowable for at least the reasons given for Claim 3.

Referring to Claims 20-22; Claims 20-22 have been amended to depend from Claim 14. Claims 20-22 are believed to be allowable for at least the reasons given for Claim 14.

The Examiner's reconsideration of the rejection is respectfully requested.

As to Claims 25-27 and 31-33, the Examiner stated essentially that the claims are not directed towards tangible embodiments.

Claims 25 and 27-33 are directed towards, "A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for processing operations that use data vectors each comprising a plurality of data elements"

A claim to a computer readable medium encoded with functional descriptive material that can function with a computer to effect a practical application that results in a useful, concrete and tangible result is believed to satisfy Section 101; see for example, U.S. Patent 5,710,578 to Beauregard et al. Such claims, e.g., those directed towards a program storage device are well established as being statutory subject matter. Therefore, Claims 25 and 27-33 are believed to be directed towards statutory subject matter.

The Examiner's reconsideration of the rejection is respectfully requested.

For the forgoing reasons, the application, including Claims 3, 5-11, 14, 16-22 and 25, 27-33, is believed to be in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

Respectfully submitted,

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